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ASARCO

JAN 14 2003

January 9, 2003

Suzanne J. Bohan
Enforcement Attorney
US Environmental Protection Agency, Region VIII
999 18th Street - Suite 300
Denver, Colorado 80202-2466

Dear Ms. Bohan:

In my October 31, 2002 letter, Asarco advised EPA that Asarco had decided not to actively participate in the design and construction of the test PRB at the East Helena Plant. As described in my October 31st letter and consistent with Asarco's agreement outlined in my June 27th, 2002 letter, Asarco will provide EPA with an upfront capped payment not to exceed $350,000 no later that March 31, 2003 with any remaining funds returned to Asarco should final construction costs be less than $350,000.

My letter also noted that Asarco believes a written agreement is needed between EPA and Asarco that will help delineate certain responsibilities for both Asarco and EPA. The agreement would also allow EPA and its contractors access to the plant site for PRB testing purposes. In my October 31st letter, we requested a meeting with EPA and its contractor to discuss and clarify Asarco's concerns and to answer any questions. As a result, a mutually agreed date of January 22, 2003 has been scheduled for a meeting between EPA and Asarco to address PRB design, construction and agreement issues. In order to facilitate the January 22nd meeting, the following discussion outlines Asarco's technical, logistic and administrative concerns relative to test PRB wall design and construction.

As described in my October 31st letter, I want to emphasize that Asarco has specific on-site health, safety, and environmental regulations that on-site contractors must meet. Asarco requires that all contractors secure adequate liability and worker's compensation insurance. The contractor must resolve soil management issues (storage and disposal) prior to excavation. We know that the construction of the PRB trench will likely involve significant collateral damage to existing site infrastructure including, but not limited to railroad tracks, paved roadways, parking lots, storm water treatment pipelines, surface runoff structures, and data information corridors.

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Asarco wishes to highlight one particular issue associated with PRB construction that we believe is of significant concern: the possibility of consequences to groundwater flow and quality as a result of EPA's PRB testing program. Asarco is concerned that trenching and installation of the test PRB wall in the center of the arsenic plume will result in changes in groundwater flow and movement of the existing arsenic plume. Nonetheless, EPA has strenuously advocated construction of the PRB system despite Asarco's reservations. EPA has decided to proceed and will now be in charge of construction of that system; consequently, EPA will be wholly responsible for any impacts to groundwater quality or flow resulting from PRB construction.

Our reservations in this regard are heightened by the recent discovery of arsenic in the intermediate aquifer. There is a concern that the arsenic plume at the base of the intermediate aquifer may have occurred or been enhanced as a result of cross-contamination by EPA's test well completion methods on the plant site. As part of the CERCLA and RFI programs, both EPA and Asarco have been very careful not to complete well screens across fine-grained strata that may act as barriers for vertical migration of arsenic and other contaminants. Asarco, (through Hydrometrics) voiced this concern to EPA prior to its installation of the PRB test wells. Notwithstanding this concern, the PRB test wells were completed through the entire saturated alluvial package, including across fine-grained strata.

Previous to EPA's testing program, all data from groundwater samples from wells completed in the deeper portion of the alluvial package identified as the intermediate aquifer ranged from laboratory detection limits (typically 0.005 mg/l) to a one time measurement of 0.05 mg/l at EH-100. This is a value typically observed in up-gradient monitoring and residential wells and is consistent with ambient water quality.

The recent (2001 and 2002) values observed in the intermediate aquifer at monitoring well EH-100 (4 to 7 mg/l) was coincidently noted near the time of EPA test wells - test wells that were completed through the entire saturation zone on the plant site in the PRB testing area.

Although it is not known if, in fact, these test wells have provided a conduit for shallow contamination to migrate to deeper portions of the alluvial package (intermediate aquifer), the possibility is a significant concern to Asarco. The recent wells completed by EPA and construction of the planned test PRB trench could provide a more complete pathway for vertical migration of contaminants resulting in even poorer down-gradient water quality.

It is worth noting that, in general, water quality in shallow aquifer groundwater has improved significantly on the plant site and in the City of East Helena. This improvement can be attributed to the interim measures implemented as part of CERCLA and RFI activities. The only trend of increasingly poor water quality is in the intermediate aquifer and this trend is coincident in time with EPA's PRB test well program.

EPA has collected detailed groundwater quality and flow stratification data in the area of the proposed PRB test wall. These data may shed light on Asarco's concerns of cross-contamination from shallow groundwater water systems to deeper strata as a result of the testing investigation and PRB wall construction program. Asarco through both Hydrometrics (2001), and more recently (October 2002) through ACI (Asarco Consulting Inc), has requested the opportunity to review EPA's testing data; in the spirit that EPA has requested and received Asarco's groundwater data for PRB study purposes. To date none of EPA's test data have been provided. Asarco believes these data could be very helpful in evaluating PRB design and construction concerns relative to groundwater flow and contaminant migration impacts. It is recommended that any available data be provided to Asarco prior to Asarco and EPA's scheduled meeting on January 22nd.

In addition to the above issues, we wish to reiterate the following observations for discussion at EPA's and Asarco's January 22nd meeting.

- The permeability of iron media in the wall appears to be significantly lower that the existing aquifer (based on the information presently available from EPA). A low permeability wall relative to the existing aquifer could act as an in-ground diversion resulting in plume migration in different directions and to different locations than presently occurs. The City of East Helena residents that have down-gradient groundwater supply wells have not, to date, been affected by arsenic in groundwater. Unless proven otherwise, Asarco has to assume that any change to this condition is the result of PRB testing activities and is therefore the responsibility of EPA.

- EPA should consider other well installation techniques including use of large diameter drill holes arrayed to form a PRB wall. The advantage of this approach would be significantly less collateral damage to existing infrastructure and lower costs associated with soil storage and disposal. The primary disadvantage may be that the wall would not be absolutely continuous but this method may approximate a continuous wall at significantly lower costs than trench excavation techniques.

Finally, our meeting should definitively outline EPA and Asarco's responsibilities as will be detailed in an agreement between Asarco and EPA. Attending the meeting for Asarco will be Jon Nickel, Bob Miller and Dave Nation. Suzanne, could you let me know who you expect to attend the meeting for EPA? As always, please feel free to call me or Jon Nickel with any issues you may have prior to our scheduled meeting.

Sincerely,

Thomas L. Aldrich
Vice President of Environmental Affairs